

Era Aviation, Inc.

Era Aviation Services

PROCUREMENT SPECIFICATION

PROCUREMENT SPECIFICATION NO. 4022

HOSE ASSEMBLY - MEDIUM PRESSURE
FUEL, CONVOLUTED TFE (TEFLON), NON-ARCING

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ERA P S 4022

REV C

DATE 06/09/00

LOG OF REVISIONS

REVISION	DATE	PAGES AFFECTED	REVISION DESCRIPTION	APPROVED DATE
IR	06/13/95	ALL	Initial Release	<i>D. Marnill</i> 06/13/95
A	11/03/95	A, B, 5 & 6	Revised title to denote hose use in fuel vapor atmosphere. Revised approved vendor info.	<i>D. Marnill</i> 11/03/95
B	11/18/96	B & 3	Added -4 size hose to Table I	<i>D. Marnill</i> 11/18/96
C	06/09/00	B, C, & 1 thru 5.	Revised notes 5, 7, 8, & 10 Added operating pressure to Table I. Renumbered some notes for consistency. Added reference to PS4021 in notes. Added Page C.	<i>D. Marnill</i> 06/09/00

ERA P S 4022

REV C

DATE 06/09/00

TABLE OF CONTENTS

<u>Paragraph</u>	<u>Subject</u>	<u>Page No.</u>
	TITLE PAGE	A
	LOG OF REVISIONS	B
	TABLE OF CONTENTS	C
1	INTRODUCTION	1
1.1	Purpose	1
1.2	Hose Assembly Application	1
2	HOSE ASSEMBLY PART NUMBERS	1
2.1	Part No. Code	2
2.2	Example of Hose Assembly Part No.	3
2.3	Hose Size Code	3
2.4	End Fitting Style Code	3
3	NOTES	4
4	APPROVED PROCUREMENT SOURCES	5

ERA P S 4022 REV C DATE 06/09/00

1 INTRODUCTION

1.1 Purpose

This process specification provides information for creating an Era Aviation part number for a flexible hose assembly which can be called out on the next assembly "using" drawing.

1.2 Hose Assembly Application

The hose assembly defined by this specification is a non-arcing, convoluted flexible tetrafluoroethylene (TFE) Teflon type hose reinforced with Nomex and reusable end fittings. The hose assemblies are suitable for use in aircraft medium pressure fuel and engine oil systems inside aircraft fuel tanks where the hose assembly must be non-arcing. This hose uses a Nomex reinforcement in place of a stainless steel wire braid to prevent arcing and sparks caused by a lightning strike to the aircraft. See Section 3, note 2 for applicable limitations.

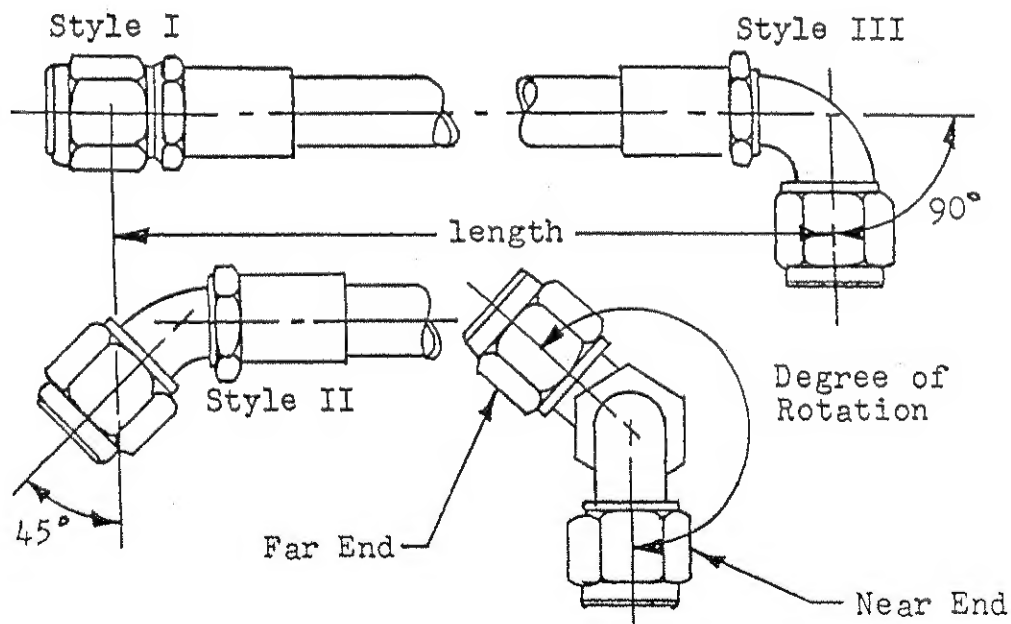
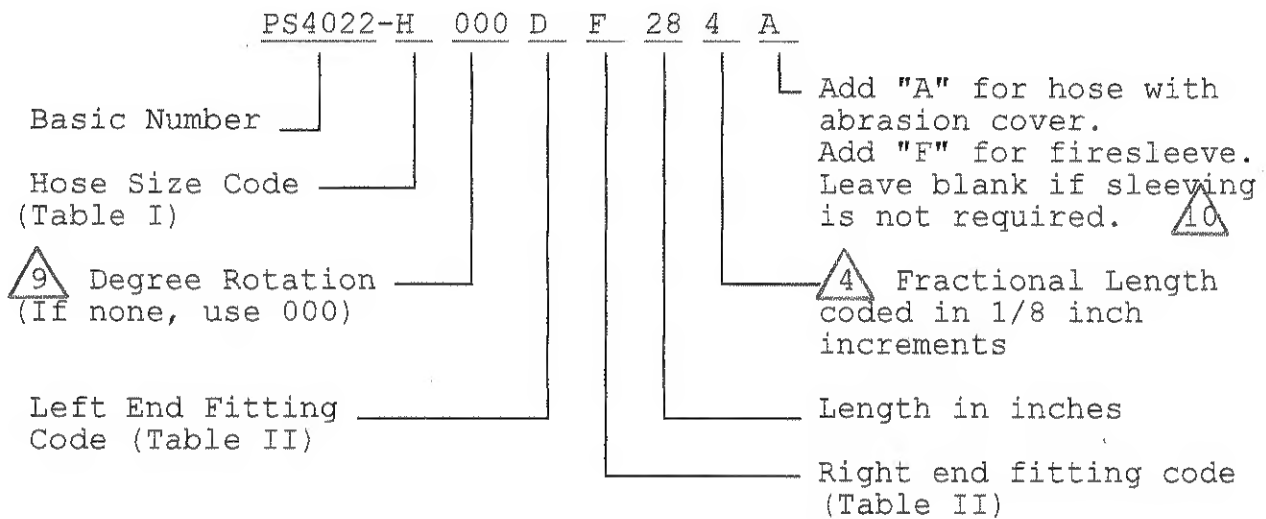
2 HOSE ASSEMBLY PART NUMBERS

A hose assembly part number can be created or deciphered by examination of the "part no. code" and "example of hose assembly part no." sections shown in Sections 2.1 and 2.2, respectively. Use "Table I" and "Table II" in Sections 2.3 and 2.4, respectively, to code the hose size and end fitting style in the part number. The end fitting style refers to whether the fitting is straight, 45° angle, 90° angle 37° flared nut, or flanged and the fitting material (stainless steel or aluminum).

The notes in Section 3 provide specific information used in the specification of the hose assemblies.

ERA PS 4022 REV C DATE 06/09/00

2.1 Part No. Code:



ERA PROCUREMENT SPECIFICATION

ERA P S 4022 REV C DATE 06/09/00

2.2 Example Of Hose Assembly Part No:

PS4022-H000AC284A - Hose Assembly, .50 Inch Diameter
Nominal Hose Size, 0° Rotation, Straight Steel Flared
Fitting on the Left End of the Hose, 90° Steel Flared
Fitting on the Right End of the Hose, 28 1/2 Inches Long
with Hose Abrasion Cover

2.3 Hose Size Code

Use Table I to specify the code letter for the desired nominal hose size (inside diameter). Dash numbers shown are equivalent tubing outside diameter in 1/16" increments. The normal maximum operating pressure is also shown.

Hose Size	-4	-6	-8	-10	-12	-16
Code Letter	E	G	H	J	K	M
Max Operating Pres. (psig)	300	300	250	250	200	200

TABLE I

2.4 End Fitting Style Code

Use this table to specify the fitting style of each metal end fitting.

Fitting Code	Fitting Style <u>3</u>	Fitting Part No. <u>6</u>	Socket Part No. <u>6</u>
A	I (37° Flared)	AE29970__	AE24204__
B	II (37° Flared)	AE30022__	AE24204__
C	III (37° Flared)	AE29972__	AE24204__

TABLE II

ERA P S 4022 REV C DATE 6/09/00

3 NOTES

1. Hose assemblies defined by this specification are intended to conform to SAE AS1227 (convoluted low pressure - Teflon). Abrasion shields, if required, shall be as defined in Note 10.

2. These hose assemblies are intended for use with MIL-T-5624 fuel with a fluid or ambient temperature operating range of -65°F to +275°F. See Table I for normal maximum operating pressure. See vendor data for minimum bend radius.



37° flared end fittings shall mate with an MS33656 fitting design. Threads shall conform to MIL-S-8879. See Table II for style configuration.



Fractional length hoses shall be specified in the following increments only:

- a. Under 18 inches long = 1/4 inch increments only
- b. Over 18 inches long = 1/2 inch increments only

5. Hose assemblies shall be fabricated in accordance with Era Process Specification PS4021, Type II.



This is the vendor's part number of a specific component of the hose assembly. A letter shall be placed at the end of the part number to designate the size. Refer to Table I on Page 3 to determine the correct code letter for each size.

7. Identify each hose assembly per PS4021, Section 6.



Two parts are required for each hose assembly.



Angular orientation between the elbows is expressed in three digits. The angle is measured in degrees counterclockwise from centerline of the nearest fitting when positioned at 6 o'clock to the centerline of the other fitting as shown in the figure. If the desired orientation is zero degrees, specify "000".

ERA P S 4022 REV C DATE 6/09/00



If specified, this hose assembly shall have a part number AE105 sleeve over the Nomex covered convoluted Teflon hose. The purpose of this cover is to provide abrasion resistance protection to the hose assembly. Install sleeve per PS4021, Section 5.1.

11. Do not mix different hose vendor component parts in the same hose assembly.

4 APPROVED PROCUREMENT SOURCES

Hose assemblies and component parts may be purchased only from the following Era Aviation engineering approved sources or their agents:

COMPONENT PART	APPROVED VENDOR & CORRESPONDING PART NUMBERS		
	Aeroquip Corp. Jackson, MI		
Hose	AE645__		
Fitting Style I	AE29970__		
Fitting Style II	AE30022__		
Fitting Style III	AE29972__		
Socket	AE24204__		
Abrasion Sleeve	AE105__		